

ABSTRACT

A three-dimensional flow-through electrode includes an efficient current feeding mechanism including current feeders comprising rods of conductive material, such as graphite, which are inserted at predetermined spacing into a flow-through electrode, such as a block of graphite felt.

- 5 The current feeders are appropriately spaced throughout the electrode to allow for efficient current distribution. The large surface area provided by the flow-through electrode makes it possible to expose solutions or gases to relatively large areas of electrical charges, instituting electrical chemical reactions. A number of electrolytic chemical processes using the electrolytic cells include water treatment, chemical processing and production, hydro-metallurgical applications, and
- 10 environmental clean-up. A method to replace the use of cyanide in gold and silver processing operations is also provided.